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IN THE CLAIMS

- 1-36 (canceled)
- (currently amended) A compact comprising:

70 to 97 80 to 95 vol % component A comprising alpha- and beta-SiAlON and a partially crystalline grain-boundary phase; and

5 to 20 vol.% of component B comprising a hard material which is in globular form and an average grain size of from 1 to 5 of 1.5 microns;

wherein the compact is sintered and has a sintered surface and a hardness of at least 1550 HV 10 and wherein said compact has an <u>alpha-SiAION</u> alpha-SiAION gradient which decreases from the sintered surface to an inside of the sintered compact;

wherein the sintered surface has an alpha-SiAlON content of up to 100%,

wherein said hard material is SiC, wherein the state of the hard material remains unchanged after sintering;

wherein the content of grain-boundary phase is less than 10 vol.% and comprises phases of aluminum containing melilite or disilicate;

wherein in the inside of the sintered compact comprises from 15 to from 1.5 to 50 vol.% alpha-SiAION and

wherein the amount of beta-SiAlON ranges from 50 to 85 10 to 90 vol.%.

- 38. (currently amended) The <u>compact</u> material according to claim 37, wherein grain-boundary phase is less than 5 vol.%.
- 39. (currently amended) The <u>compact material</u> according to claim 37, wherein the grain-boundary phase contains aluminum-containing melilite.

- 40. (currently amended) The compact material according to claim 37, wherein a maximum grain size of the alpha- and beta-SiAlON is less than 90 is 5 μm.
 - 41. (cancelled)
 - 42. (cancelled)
- 43. (currently amended) The compact material according to claim 37, coated with a wear-reducing coating.
- 44. (currently amended) A process for producing the <u>compact material</u> of claim 37, comprising powder mixing, shaping, sintering and grinding.
- 45. (previously presented) A process according to claim 44, wherein component A is formed during a heat treatment at a temperature of from 1800 to 2000°C a retention time at the maximum temperature of 0.5 to 5 hours.
- 46. (previously presented)A process according to claim 44, wherein sintering is conducted in an inert atmosphere.
 - 47. (currently amended) The compact material produced by the process of claim 44.
- 48. (currently amended) The compact material according to claim 43, wherein said wear-reducing coating comprises at least one of Al₂0₃, TiN or TiC.
- 49. (previously presented) A process according to claim 46, wherein sintering is conducted in a gas atmosphere that comprises N₂ or a mixture of N₂ and another inert gas.
- 50. (previously presented)A process according to claim 46, wherein the inert gas comprises argon.
 - 51. (new) A compact comprising:
- 80 to 95 vol % component A comprising alpha- and beta-SiAlON and a partially crystalline grain-boundary phase; and

5 to 20 vol.% of component B comprising a hard material which is in globular form and an average grain size of less than 30 microns;

wherein the compact is sintered and has a sintered surface and a hardness of at least 1550 HV 10 and wherein said compact has an alpha-SiAlON gradient which decreases from the sintered surface to an inside of the sintered compact;

wherein the sintered surface has an alpha-SiAION content of up to 100%,

wherein said hard material is SiC, wherein the state of the hard material remains unchanged after sintering;

wherein the content of grain-boundary phase is less than 10 vol.% and comprises phases of aluminium containing melilite or disilicate;

wherein in the inside of the sintered compact comprises from 15 to 50 vol.% alpha-SiAION and

wherein the amount of beta-SiAlON ranges from 50 to 85 vol.%.

- 52. (new) The compact of claim 51, wherein said average grain size of said hard particles is less than 15 microns.
- 53. (new) The compact of claim 51, wherein said average grain size of said hard particles is less than 5 microns.